# Workshop Agenda
# Project Assessment and Evaluation

**1. Sign-In and Breakfast** **8:30-9:00**

Outside of training room from 8:30-9 AM, two large posters will allow early arrivers to provide additional questions and comments that they want answered. Early arrivers will have an opportunity to write their expectations and desired outcomes for the workshop on flipchart.

**2. Welcome and Introductions** **9:00-9:45**
Brief Welcome, Introductions, and Housekeeping Items

**3. Goals of Workshop:** **9:45-10:15**
Quick review of what a PAEP is, brief history, benefits, explanation of handouts, FAQs. PAEP development and approval process, checklist, new categories, simplified terminology. Group Exercise. Guidance to date: What has worked well, what could be improved? Project management using the PAEP. Case Studies. Resources on-line. Wrap-up and evaluation.

**Brief 5-Minute Break** **10:15-10:30**

**4. Quick PAEP Review** **10:30-11:30**
a) What is a PAEP?
b) Rationale behind PAEP
c) Brief history; how did it come about (3 min.)
d) Why is improved data reporting for grant projects required?
e) FAQs

**5. PAEP Development Process** **11:30-12:00**
a) Define key terms
b) Revised Activity Categories and Core Outcome Indicators
c) What makes a good summary table? Breakout groups develop summary table based on Pajaro Valley Water Management Agency Integrated Regional Water Management Plan

**LUNCH BREAK** **12:00-1:00**

**5c. Groups Report Back – Discussion** **1:00-1:30**

**6. PAEP Approval Process** **1:30-2:00**
Things you need to know to get your PAEP approved

**BRIEF BREAK** **2:00-2:15**

**7. Project Management Using the PAEP** **2:15-2:30**
How to use your PAEP throughout the life of your project. How a PAEP can be more than a requirement, but a management tool to benefit the grant manager and the grantee.

**8. Case Studies** **2:30-3:15**

**9. Summary of Resource Information Available On-line** **3:15-3:45**

**10. Wrap-Up and Course Evaluation** **3:45-4:00**

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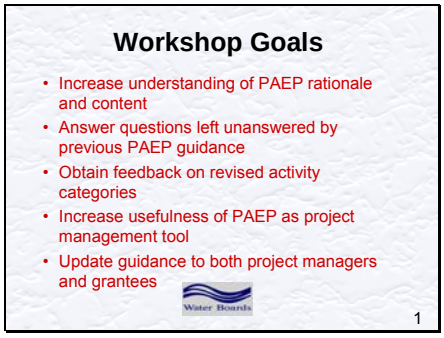
*Agenda Item 3*

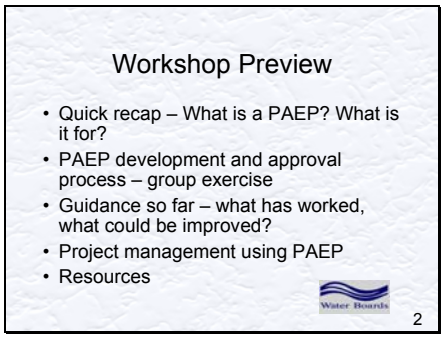
## Goals of Workshop

# Slides

Slide 1




Slide 2



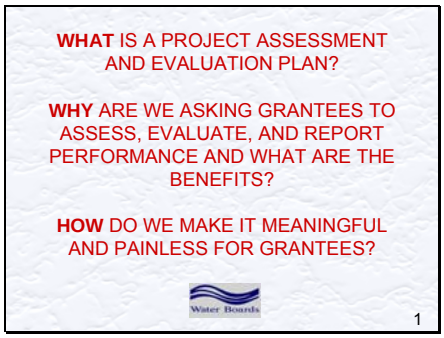

Slide 3

*Agenda Item 4*

# Quick PAEP Review

## Slides

Slide 1

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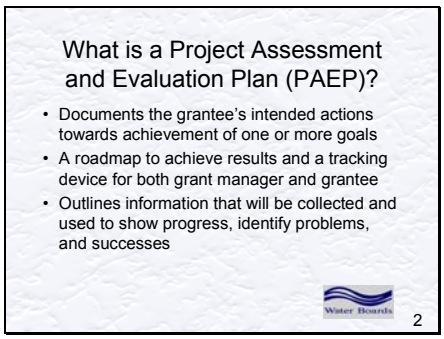


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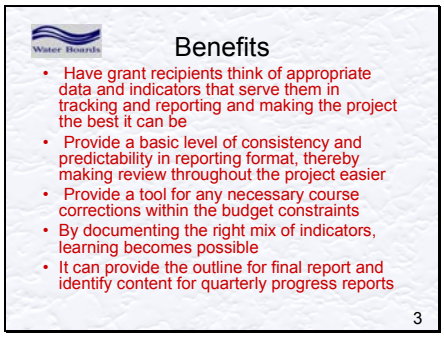

Slide 4

## PAEPs Can Answer Questions:

- How many projects and $$ have been awarded in my Senate/Assembly District?
- Have ecosystem health and water quality improved as a result of the $$ awarded?
- What new information has been generated in each bioregion of the state that could be included in the next 305(b) report?
- Which watersheds in my bioregion are in poor, fair, good, and excellent condition?
- Which stressors on the ecosystem are the most important ones in my watershed?

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Slide 5

## PLAN ELEMENTS AND FORMAT

- **Project Summary**
  - Project Description
  - Problem Statement
  - Project Activities (Tasks)
  - Activity Categories
- **Goals and Desired Outcomes**
- **Performance Measure Tables**

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Slide 6

## PROJECT ACTIVITY CATEGORIES

1. PLANNING, RESEARCH, AND ASSESSMENT
2. EDUCATION, OUTREACH, AND CAPACITY-BUILDING
3. HABITAT RESTORATION

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Slide 7

Project Activity Categories, cont.

4. **Pollutant Load Reduction**
5. **Water Conservation, Reliability Enhancement, and Recycling**
6. **Flood Attenuation and Floodplain Protection**

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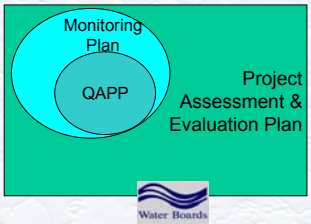
Slide 8

**PAEP, Monitoring Plan, and QAPP – How do they differ?**

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The PAEP contains ALL performance measures

- Activities and interim products (outputs)
- Change in *social and behavioral* conditions as a result of your activities (outcomes)
- Change in *environmental* conditions as a result of your activities (outcomes)

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Slide 10

## Monitoring Plans

- Describe WHAT you intend to measure
- Describe HOW you intend to measure *environmental* outcome indicators – number and location of sampling sites, proposed approaches and methods
- Describe WHO is involved; roles and responsibilities

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Slide 11

## Quality Assurance Project Plan

- Outlines Data Quality Objectives
- Describes staff roles and responsibilities in field, office, and laboratory quality control
- Describes procedures to control and quantify sampling, analysis, mapping, and reporting errors
- Describes HOW you intend to analyze and report information

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Slide 12

## SOME AWESOME STATISTICS

- **$1.3 BILLION IN GRANT FUNDS ADMINISTERED BY WATER BOARDS SINCE PASSAGE OF PROPS 13, 40, AND 50**
- **$80 MILLION YET TO GO**

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Slide 13

## PAEPs as Communication and Accountability Tool (SB 1070)

- Provide data to the public (via the internet) that shows how bond money is being used to finance clean water and healthy ecosystems
- Develop monitoring and assessment information on environmental changes and conditions over time to establish priorities, evaluate successes over time and report on accomplishments

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## Frequently Asked Questions

**1. Is the PAEP helpful to all kinds of projects, even those that fall into the planning and assessment category?**

*Yes! Assessing and evaluating project benefits are helpful to insure the success of all projects. The key to evaluating "performance" is to link the usually general overall project goals (e.g., determine relative contributions of excessive sediment inputs into River X and prioritize load reduction efforts) to desired project outcomes and measurable targets for your project accomplishments.*

**2. Are the "targets" we list in the summary table expected to be achieved at the end of the grant, or are targets more like tools to gauge success and use for project tracking and adjustments?**

*Targets are good-faith estimates of what grantees think may be achievable – not strict numbers by which a project will be judged. They are means by which a project as it unfolds can be tracked and adjusted.*

**3. Do "targets" have to be numeric or quantitative in all cases?**

*In most cases, a general project goal (e.g., restore aquatic life uses in watershed, or provide tools to local government to develop an Action Plan and scenario-planning) can be linked to some kind of numeric target (e.g., improve IBI scores by 25%; or add four additional tools to the local government tool chest for reducing and mitigating the extent of hydromodification in the watershed). By expressing targets in quantitative terms whenever possible (acres restored, % of watershed covered by certain management practices, number of cities and counties in project area that have adopted the Ahwahnee Principles; degree of improvement in Index of Biotic Integrity scores), grantees will be able to more systematically think about what to measure and how to measure. More often than not, "what doesn't get measured, doesn't get managed."*

**4. What is the difference between a PAEP, a Monitoring Plan and a QAPP?**

*The PAEP is a framework for your project that will help you determine if the project is heading toward success throughout the project's life. It links the goals to targets that will be used as a "ruler" to monitor progress toward achievement of desired benefits within and outside the grant timeframe. It is a detailed summary of your project, that includes your full intentions for success, the way you plan to reach your desired outcomes, and what kinds of*

*resources and tools you have thought about using to see that you are on track of meeting your desired outcomes.*
*The Monitoring Plan describes in detail WHAT water quality constituents you intend to measure, HOW you intend to collect and measure them, and WHO will be involved. The QAPP describes what kinds of samples and measurements you intend to take that enable you to quantify, evaluate, and document errors during sampling, analysis, mapping, and reporting, as well as how you intend to analyze data and share the information. The QAPP guides you in determining sensitivity, precision, accuracy, and completeness of your data, so they are suitable in answering your questions (e.g., have sampling stations exhibiting sediment toxicity decreased after implementation of BMPs?)*

**5. How do you know the PAEP is adequate and ready for approval?**

*Use the checklist for PAEP review and approval (new).*

**6. What's the difference between 'Outputs' and 'Outcomes', and how should they be reported?**

*'Outcomes' are the results, impacts, or consequences of actions and activities pertaining to each of your project goals. 'Outcome Indicators' are comprised of the types of measurements you use to see if you have accomplished the intent behind each goal. Because your goals can be arranged in hierarchical order (the* ***ultimate*** *goal may be to restore a Chinook salmon run in a particular river, but several intermediate goals would affect the ultimate outcome of restoring the salmon run), outcomes will follow that same hierarchical order (please refer to http://science.calwater.ca.gov/sci_tools/wide_perf_measures.shtml).*

*'Outputs' are the widgets required to produce an outcome and accomplish the intent of each of your project goals. If the intent of one of the goals is to reduce nutrient loads to a coastal lagoon, an 'output' might be to install a natural treatment system or restore the nutrient absorption functions of a freshwater marsh that can intercept the nutrient inputs into the drainage system before it reaches the coastal lagoon. If the intent of another one of your goals is to increase awareness of city council members, so they see the wisdom behind changing building codes to promote low-impact development, which may contribute to reductions in nutrient loadings, an 'output' may be the number of city officials that attend your training sessions or the number of course books you have distributed.*

**7. How can I utilize my PAEP during project implementation?**

*Each time you write a quarterly progress report, you may want to compare how your activities are gradually contributing to the targets in your PAEP Summary Table, what challenges you have encountered, what external factors beyond your control may require timeline adjustments, or if relative work effort among tasks may have to be re-aligned.*

**8. What is the difference between agreement requirements and PAEP 'Targets'?**

*Targets are not part of your Grant Agreement. You are only responsible for delivering the items specified in your grant agreement, such as those listed in the Scope of Work ( Exhibit A), Table of Items for Review, or elsewhere in the agreement. However, targets are helpful in quantifying the desired outcomes associated with each of your project goals when writing the Final Report and should be used to document success.*

*Agenda Item 5*

# PAEP Development Process

## Simplified Definitions of Key Terms

Goals: Statements of ideal future desired conditions. Goals represent the ultimate intention of agreed-upon actions and targets. Goals can range from being explicitly quantitative to more qualitative and subjective.

Outcome: Results, impacts, or consequences of actions and activities. Something that is changed as a result of project actions and activities.

Outcome Indicators: A readily useable dataset to show change in a particular social or environmental condition that the grantee is trying to directly affect and so show success. Examples: Tons of sediment reduced, percentage of people with increased awareness and knowledge, etc.)

Output: Goods and services produced – colloquially often referred to as "widgets" or "beans."

Output Indicators:

- Administrative output indicators track the administrative actions of a specific project (e.g., number of progress reports written, permits obtained).
- Project output indicators track deliverables and intermediate milestones (e.g. number of workshop attendees, development of pollution prevention plans)

*Output Indicators can be counted and show effort, but do not indicate improvement in environmental or social condition.*

Target: A defined and *measurable outcome indicator* that relates to the goal of a project. A level of performance that is desired within a given timeframe. (examples: 2 tons of sediment removed by end of project period; 10% of watershed residents can describe what a watershed is, etc.)

Measurement Tools and Methods: The contents of a "toolbox" and the instructions of how to use them. They can include analytical instruments, protocols and "how-to-manuals", interactive, web-based forecasting and scenario-playing models; or interactive maps.

## Logic Model

| | INPUTS | ►►► | OUTPUTS | | ►►► | OUTCOMES - IMPACT | | |
|---|---|---|---|---|---|---|---|---|
| | | | ACTIVITIES | PARTICPATION | | SHORT TERM | MEDIUM TERM | LONG TERM |
| | *What we invest* | | *What we do* | *Who we reach* | | *What the short term results are* | *What the medium term results are* | *What the ultimate impact(s) is* |
| CONDITIONS ► PRIORITIES | Money<br>Staff<br>Volunteers<br>Experts<br>Materials<br>Equipment<br>Technology<br>Partners | | Conduct workshops;<br>Deliver services;<br>Develop resources;<br>Provide training & expertise;<br>Assess;<br>Facilitate;<br>Collaborate | Stakeholders<br>Land Owners<br>Public<br>Agencies<br>Decision-makers | | ***Learning<br>Awareness<br>Knowledge<br>Attitudes<br>Skills<br>Opinions<br>Aspirations<br>Motivations | ***Action<br>Behavior<br>Practice<br>Decision-making<br>Policies | ***Conditions<br>Environmental<br>Economic<br>Social<br>Civic |
| | | | ▼ ▲ ▼ ▲ | | | ▼ ▲ ▼ ▲ | | |
| | | | **ASSUMPTIONS and CONCEPTUAL MODELS** | | | **EXTERNAL FACTORS** | | |

## Logic Model Definitions

The **condition** (problem statement) is the foundation. The problem or issue that the project is to address sits within a complex number of sociopolitical, environmental, and economic conditions. If you incorrectly understand the condition and misdiagnose the problem, everything that follows is likely to be wrong.

From the condition come **priorities** (priority setting). Once the condition and problem are fully analyzed, priorities can be set. Seldom can we undertake everything - so we have to prioritize. Several factors influence your determination of focus; these include your mission, values, resources, expertise, experience, history, what you know about the situation, and what others are doing in relation to the problem.

**Inputs** are the resources and contributions that you and others make to the effort. These include time, people (staff, volunteers), money, materials, equipment, partnerships, research base, and technology among other things. These **inputs** allow us to create **outputs.**

**Outputs** are the activities, services, events, and products that **reach** people (individuals, groups, agencies) who participate or who are targeted. **Outputs** are "what we do" or "what we offer." They include workshops, services, conferences, community surveys, facilitation, in-home counseling, etc. These **outputs** are intended to lead to specific **outcomes.**

**Outcomes** are the direct results or benefits for individuals, groups, communities, organizations, or systems. Examples include changes in knowledge, skill development, changes in behavior, capacities or decision-making, policy development, changes in system conditions. Outcomes can be short-term, medium-term, or longer-term achievements. Outcomes may be positive, negative, neutral, intended, or unintended.

**Impact** refers to the ultimate consequence or effects of the project--for example, improved water quality, increased wetland acreage, and decreased pollution runoff. Impact is synonymous with the long-term outcome or your goal. Impact refers to the ultimate, longer-term changes in environmental, social, or economic conditions. In common usage impact and outcomes are often used interchangeably.

**Assumptions** are the beliefs we have about the project and the people involved and the way we think the project will work. This is the underlying belief in how it will work. These are validated with research and experience. Assumptions underlie and influence the project decisions we make. Assumptions are principles, beliefs, ideas about such as the problem, the knowledge base or the participants. Assumptions are often depicted and made explicit in conceptual models.

**External factors** can influence a project's success. External factors include the cultural milieu, the climate, economic structure, housing patterns, demographic patterns, political environment, background and experiences of program participants, media influence, changing policies and priorities. These external factors may have a major influence on the achievement of outcomes.

## Revised Project Activity Categories - 2007

The Project Assessment and Evaluation Plan (PAEP) groups activities into six major categories. They are:

- **Planning, Research, and Assessment**
- **Education, Outreach, and Capacity-Building**
- **Habitat Restoration**
- **Load Reduction**
- **Water Conservation, Supply Reliability Enhancement, and Recycling**
- **Flood Attenuation and Floodplain Protection**

*Planning, Research, and Assessment* includes activities that precede implementation of pollution prevention and reduction practices, restoration of habitat and watershed processes and functions (e.g., groundwater recharge, storm water conveyance, sediment transport), implementation of education and outreach activities, and integrated projects with multiple benefits. Planning, research, and assessment activities can include development of analytical methods for detection of sub-lethal adverse effects on aquatic organisms, testing of alternative hypotheses related to pollutant transport mechanisms or watershed functions, development and application of land use and mitigation forecasting models and other scenario-planning tools, development of quantifiable goals or benchmarks related to habitat protection, in-stream flow requirements, species recovery, or pollutant assimilative capacity, development of digital maps for geospatial analysis of impairment risks, and relating location of investments with beneficial use improvements. Activities in this category may also include characterization and assessment of watershed conditions, impairment assessment, analyses of limiting factors to beneficial use recovery, and linking management responses to improvements in watershed conditions.

*Education, Outreach, and Capacity-Building* includes activities that are primarily designed to increase awareness about human activities that contribute to beneficial use impairment and to change behavior in such a way that human-induced stressors on aquatic organisms or watershed processes and functions are reduced below critical threshold levels. They may include workshops for local elected officials and other land use decision-makers, building technical expertise and providing guidance in the preparation of Farm Plans, supporting under-represented communities to participate in decision-making and providing access to complex and technical information.

*Habitat Restoration* includes activities that directly improve the physical or biological condition of a water body, stream reach, or watershed area or restore critical landscape features essential for the maintenance of aquatic habitat and organisms dependent on it.

*Load Reduction* includes activities that directly contribute to preventing or reducing quantifiable amounts of pollutants from entering waterbodies and aquatic food webs and are usually associated with Total Maximum Daily Load implementation plans or elements of comprehensive watershed management plans.

*Water Conservation, Water Supply Reliability Enhancement, and Recycling* includes activities that reduce reliance on imported water supplies, directly or indirectly restore in-stream flows for protection and restoration of aquatic life uses, develop required local

policies, funding mechanisms, and infrastructure for beneficial re-use of water for irrigation, seawater intrusion prevention and remediation, and other purposes, and enhance storm water runoff infiltration and groundwater recharge.

*Flood Attenuation and Floodplain Protection* includes activities that (1) provide resilience to the effects of climate change, (2) enhance and protect groundwater recharge and storage functions of floodplains, (3) protect floodplain functions as wildlife and fish migration corridors and rearing habitat, and supporting riparian habitat, (4) contribute to reductions in flood peaks and flooding impacts. Projects in this category may also include application of Low-Impact Development (LID) techniques which mimic the natural hydrologic functions of a watershed to reduce the rate, volume and pollutant loading of runoff and impairment of aquatic life uses due to increased runoff rates, stream bed and bank erosion, and resulting in-stream habitat degradation. Examples of LID projects are vegetated bioretention swales, amending soil to retain runoff, tree-box filters, and other natural treatment systems. Projects could also include preservation of open space, which allows for natural recharge to occur across a large area. Projects which retain and infiltrate water onsite can also have economic benefits in terms of reduced end-of-pipe treatment or irrigation costs.

## Revised List of "Core Outcome Indicators" - 2007

The following is a list of core outcome indicators that should guide the development of your Project Assessment and Evaluation Plan for State Water Board loans and grant-funded projects. The purpose of this core list is to provide a menu of outcome indicators that can be used to guide selection of indicators for your specific project General review of these core indicators should help you recognize which ones are appropriate for quantifying the outcomes of your project activities. This is not a comprehensive list. You may find that you can use one or more of these indicators to measure performance of your activities. In some cases you will need to develop more specific indicators for your activities. For example, in one project, anthropogenic stressors and limiting factors to beneficial use recovery may be primarily due to specific pollutants, while in other projects, the stressors may be hydromodification or flow diversions. In any case, outcome indicators for the specific stressor(s) will have to be identified that enable you to compare environmental conditions before and after you implemented your project (e.g., indicators associated with pesticide toxicity or with altered flood peaks and timing, respectively).

A. **Planning, Research, and Assessment**

1. Number of characterized watershed land cover/land use categories
2. Number and magnitude of anthropogenic stressors identified (including extent of hydromodification; known and suspected pollution source categories)
3. Peer-reviewed and adopted watershed assessment report or watershed management plan
4. Peer-reviewed and adopted long-term Monitoring Plan for TMDL or Nonpoint Source Program implementation
5. Peer-reviewed and adopted long-term Restoration Plan for beneficial use recovery
6. Adopted list of watershed-specific BMPs and restoration practices
7. Adopted conceptual models outlining hypothesized cause-effect relationships
8. Peer-reviewed and adopted limiting factors analysis
9. Peer reviewed and adopted source analysis
10. Adopted analytical methods, bioassays, or tests
11. Calibrated and validated forecasting models
12. % of groundwater recharge areas, riparian and other critical habitat, routed drainage network, etc. mapped in watershed or drainage basin

**B. Education, Outreach, and Capacity-building**

1. % increase in community awareness
2. % increase in community participation in watershed stewardship activities
3. % increase in local government expertise, resources, and management tools (e.g. GIS capacity; SOPs; public-private partnership agreements; sustained funding sources for watershed health maintenance; building codes aligned with watershed goals, etc.)
4. % increase in landowners trained and certified in BMP implementation
5. % of cities and counties within watershed, drainage basin, or project area having adopted the Ahwahnee Principles

**C. Habitat Restoration**

1. % increase in native habitat extent
2. % decrease in invasive species cover
3. Improvement in habitat condition or other biometric scores (e.g. CRAM, IBI)
4. % increase in sustained habitat maintenance and management agreements
5. % increase in watershed functions and processes resembling reference conditions

**D. Load Reduction**

1. Estimated or directly measured mass of a specific pollutant that BMP implementation prevented from reaching surface or groundwater *(required for 319(h)-funded projects)*
2. Reductions in peak flow or total runoff
3. % decrease in pollutant use and/or discharge
4. % increase in certified practices designed to result in reduction of pollutant inputs into listed water bodies
5. % increase in benthic macroinvertebrate diversity
6. % decrease in adverse effects biomarkers and targeted toxic samples (event-based water toxicity; sediment toxicity)
7. Reduction in event mean concentrations before and after BMP implementation
8. Volume of runoff treated by structural BMPs compared to average runoff volume in project area

**E. Water Conservation, Reliability Enhancement, and Recycling**

1. % increase in recycled water use in watershed or project area
2. % of groundwater recharge areas restored and/or protected in watershed or project area
3. % decrease in acre-feet lost through accelerated runoff due to increases in effective drainage density and connectivity
4. % anticipated reduction in water use by county, city, or project area based on adopted water conservation measures by jurisdiction within project area
5. Number of retrofits implemented to enhance reservoir management flexibility for multiple objectives
6. Acre-feet of subsurface storage increase in project area
7. Volume of contaminated groundwater basins cleaned up
8. % reduction in subsidence rates due to groundwater overdraft mitigation
9. Increase in water availability for environmental restoration and enhancement

**F. Flood Attenuation and Floodplain Protection**

1. Number of floodplain acres protected from urban encroachment
2. Miles of connected drainage reduced
3. Acres of wetlands restored in watershed or project area
4. Number of flood attenuation BMPs implemented
5. Number of cities and counties within watershed, drainage basin, or project area with state-of-the-art building codes and land use ordinances with flood attenuation requirements (e.g. runoff retention, on-site storage and dry-season use, use of pervious pavement, infiltration enhancements, etc.)
6. Dredging and floodway maintenance costs avoided by integrated land use and water management decisions

# Group Exercise – Pajaro River Watershed Integrated Regional Water Management Plan Implementation

## Instructions

Select a "recorder," who will write down your comments based on group discussion and consensus, and who will report exercise results to all workshop participants after the lunch break for comparison with other groups' work and discussion.

**LOAD REDUCTION GOAL** - If your group has been assigned to the Load Reduction Goal of "Aid in meeting Total Maximum Daily Loads established for the Pajaro Valley Watershed", you will be filling out the PAEP table on Page in your agenda packet.

**EDUCATION / OUTREACH GOAL** - If your group has been assigned to the Education / Outreach Goal of "Contribute to the long-term sustainability of agricultural land use management in the Pajaro Valley Watershed", then you will be filling out the PAEP table on Page in your agenda packet.

The PAEP table already lists the project goal for each activity category. Using the assigned project goal, pretend to be the project applicant preparing a PAEP summary table. Translate your goals into desired outcomes, output indicators, outcome indicators, measurement tools and targets. If you need assistance, facilitators will be around to help your group.

## Background Information

**GENERAL PROJECT DESCRIPTION**

The development of the Pajaro River Watershed Integrated Regional Water Management Plan (IRWMP) is a collaborative process with multiple stakeholders with a wide range of interests. Eight individual projects covering all six activity categories identified in the Plan were selected to be included in this proposal based upon implementation requirements, need, benefit to disadvantaged communities, available matching funding and stakeholder consensus. This group exercise focuses on a project that is part of the Pajaro River Water Quality Program.

**PROJECT DESCRIPTION FOR PROJECT 8: Erosion Control, Vegetative Treatment and Riparian Restoration**

Erosion Control, Vegetative Treatment and Riparian Restoration is a key land stewardship program that addresses NPS pollution in the extensive, active agriculture of the Pajaro River Watershed. Through the proposed program, agricultural communities will be involved in the protection of water quality within the Pajaro River Watershed. The proposed project demonstrates a highly effective implementation measure that will directly support TMDL implementation and agricultural waiver compliance, by reducing the transport of pollutants and restoring water quality improvement functions to surface waters.

## LOAD REDUCTION EXAMPLE

## PAEP Summary Table – based on Pajaro River Watershed IRWMP implementation projects

| Goals | Desired Outcomes | Output Indicators | Outcome Indicators | Measurement Tools and Methods | Targets |
|---|---|---|---|---|---|
| Aid in meeting Total Maximum Daily Loads established for the Pajaro River Watershed (sediment, pathogens, nitrates, pesticides) | | | | | |

## EDUCATION / OUTREACH EXAMPLE

## PAEP Summary Table – based on Pajaro River Watershed IRWMP implementation projects

| Goals | Desired Outcomes | Output Indicators | Outcome Indicators | Measurement Tools and Methods | Targets |
|---|---|---|---|---|---|
| Contribute to the long-term sustainability of agricultural land use management in the Pajaro Valley Watershed | | | | | |

*Agenda Item 6*

# PAEP Approval Process

## Grant Manager's and Grantee's Checklist

**List of Required Elements:**

- ✓ Title Page
- ✓ Signature Page
- ✓ Distribution List, as needed
- ✓ Project Summary Section with applicable project information
- ✓ Table of Tasks and Associated Project Activity Categories
- ✓ List of Goals
- ✓ List of Desired Outcomes
- ✓ PAEP Summary Table

1. Can project goals be met within the timeframe of the project (Grantee may have additional goals that extend beyond the grant term) and are chosen targets suitable in evaluating whether or not goals and desired outcomes can be achieved?

2. Is the Summary Table as a whole SMART (i.e., specific, measurable, achievable/agreeable, realistic/relevant, and trackable/time-bound) and doe goals enable you to determine who will do what, how, and by when?

3. Are all Goals and Desired Outcomes in each activity category adequately described as Tasks and Subtasks in the Grant Agreement?

4. Are all outcome indicators and targets directly linked to goals and desired Outcomes?

5. Are all outcome indicators comprised of measures or data that can demonstrate an improvement in environmental condition, awareness, knowledge, or reduction of a human-induced stressor (e.g. pollution, invasive species, habitat alteration, etc.)?
    - Ask yourself: What type? How many? What extent? With what? Relative to what? How much uncertainty can I tolerate?

6. Are all output indicators comprised of "widgets" or "beans" that can be counted as a result of work done that shows effort?

7. Is there a description of both the tools and methods used that are applicable to all the outcome indicators and targets listed for each goal?

8. Are the targets reasonable for the work being done and the timeframe set to achieve the goals?

9. Can the PAEP Summary Tables be easily used in conjunction with the Table of Items for Review to track progress, anticipate delays, or required timeline adjustments, and modify your approach to meet targets?

10. Are all of the approvals and sign-offs in place from Project Director (electronic final copy, hard-copy signed and dated?) and Grant Manager (signed and dated copy of final PAEP, e-mail notification of approved planning documents)

✓ Does quarterly report include statements of progress, as appropriate, toward applicable targets, desired outcomes, and goals?

## Reference of Definitions For the Checklist

**Goals** represent the ultimate intention of agreed-upon actions and targets. Express a goal in a sentence that states ideal future desired conditions.

The following goals will be achieved by the non-profit Clean Water For Waterville to provide for better water quality and water conservation by the end of this project:

1.) Will increase homeowner knowledge to reduce irrigation runoff and to teach landowners the does and don'ts of irrigation.
2.) Will increase students' knowledge of water use

The following goals will be achieved by the non-profit Clean Water For Waterville and volunteers to provide for reduced flooding and improved riparian habitat over the next 10 years.

1.) Will restore flood plain complexity and opportunities for native riparian tree recruitment and survival along the Waterville River.
2.) Will remove invasive Tamarisk from the Waterville River watershed.

**Outcome:** Results, impacts, or consequences of actions and activities. Something or someone that is *changed* as a result of the actions taken to reach a goal. Consider this as something that the goal is expected to produce. Examples:

*A stabilized bank with native vegetation; homeowners in the town of Waterville who understand how to properly irrigate their lawn to conserve water and reduce runoff.*

**Outcome Indicators:** A readily useable dataset that shows change in a particular social or environmental condition (a measurement or sets of measurements *of the change in awareness or physical, or biological improvement*) that the grantee is trying to directly affect and so show success. Examples:

Extent of native bank vegetation across the project site; percentage of Waterville people with at least a 5% increase in knowledge on proper irrigation techniques.

**Output:** Goals and services produced - colloquially often referred to as "widgets" or "beans". A "physical thing" or service that is created as a result of the work done. Products you use to achieve your goal. Examples:

*Workshops held; access permits obtained; GIS data layers produced*

**Output Indicators:** *Quantity of* "physical *things*" produced or services provided. These things can be counted and show effort, but do not indicate success. Examples:

*Number of volunteers participating in invasive species eradication; number of homeowners in attendance at the workshop; number of municipalities in the Waterville River watershed adopting the Ahwahnee Principles.*

- Administrative output indicators track the administrative actions of a specific project (e.g., number of progress reports written, permits obtained).
- Project output indicators track deliverables and intermediate milestones (e.g. number of workshop attendees, development of pollution prevention plans)

**Target/Milestone:** A defined and measurable *outcome indicator* that identifies a level of performance that is desired within a given timeframe.

*25 ft of bank stabilized with an average of .75m$^2$ vegetation coverage; 80% of homeowners in Waterville show a minimum increase of 5% in knowledge on proper irrigation techniques.*

**Measurement Tools and Methods:** What is used as the ruler to measure the outcome and target and instructions for how to use it. This column answers what is expected to be used to measure the accomplishments of goals and what steps will be taken to make that measurement. The contents of the measurement tool box may include analytical instruments, protocols, "how-to-manuals", interactive, web-based forecasting and scenario-playing models; and interactive maps. Examples:

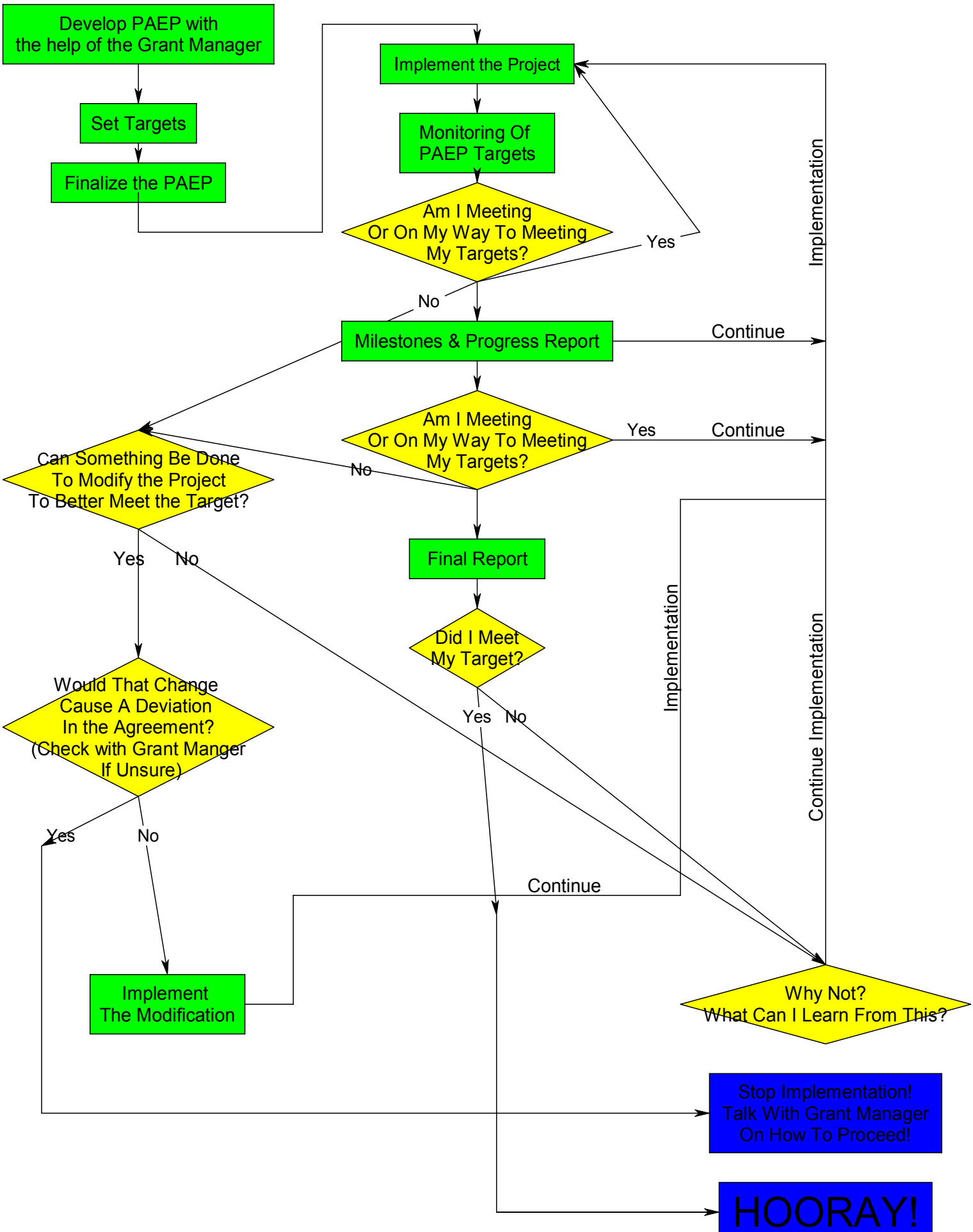
Density surveys. These surveys will use a 1 meter$^2$ quadrant frame and calculate coverage using the Jackson-Anderson method; Waterville's homeowner certifications based on pre- and post- workshop surveys and tests.

Remember to visit the PAEP website for more information
http://www.waterboards.ca.gov/funding/paep.html

*Agenda Item 7*

# Project Management Using the PAEP

# PAEP Adaptive Management Decision Tree

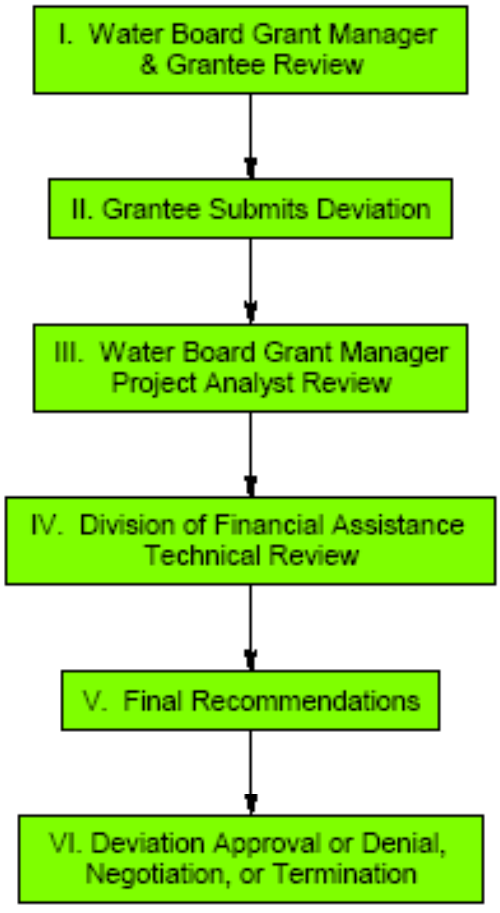


# Deviation Request Process

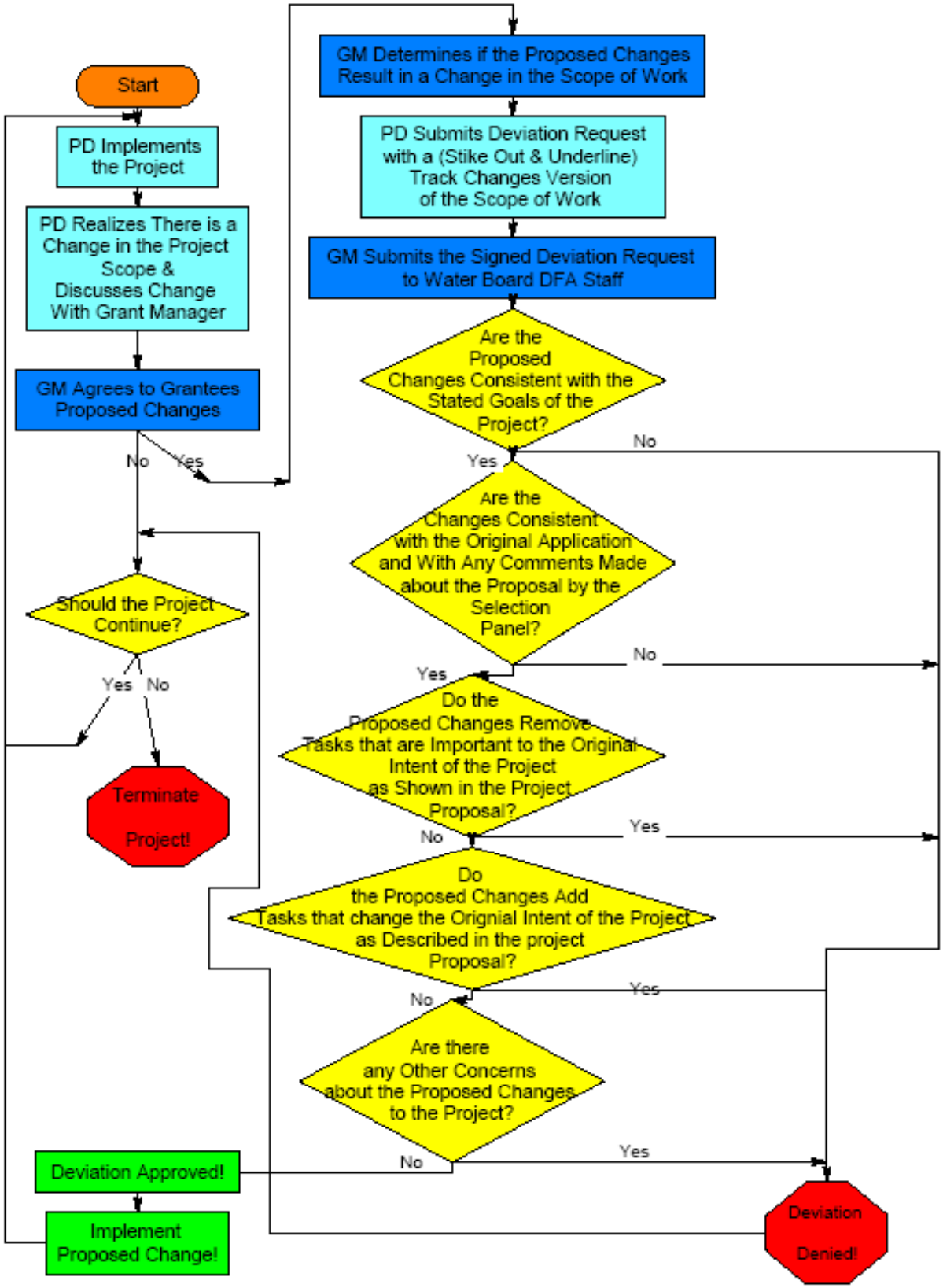
## Key

Water Board Project Analyst (PA)
Water Board Grant Manager (GM)
Grantee Project Director (PD)

## Overall Review Process



# I. Deviation Process



*Agenda Item 8*

**Case Studies**

# Keep the Delta Clean, Phase II (excerpts from Draft PAEP)

## II. Project Goals and Desired Outcomes

### i. Project Goals

1) Reduce the discharge of pollutants to the Delta from non-point sources that may be associated with recreational boating, body-contact recreation and marina operations and as a result, provide valuable local and statewide benefits through lessons learned about effective environmental services, pollution prevention outreach, and implementation strategies.

2) Develop measurement and estimation tools (pollution prevention model) that will assist in understanding the effectiveness of environmental services and boater/marina operator outreach towards reducing impacts on beneficial uses in the Delta.

3) Establish a Pollution Prevention Program that seeks responsible, shared solutions to water quality problems by influencing the behavior of marina operators, recreational boaters, and the general public.

### ii. Desired Outcomes

1) A progressive reduction in the potential non-point source pollution that may be attributed to the growing recreational boating population and marina industry in the Delta.

2) Newly installed marina-based pollution prevention services (improved access and awareness of local sewage pump-out facilities, oil and absorbent recycling, pet waste stations, fish cleaning stations, cigarette butt containers, and recycling bins).

3) Improved knowledge base of recreational users and marina operators regarding access to environmental services, the importance of pollution prevention and safety, and tangible strategies to reducing their impact on Delta water quality and beneficial uses.

4) Improved protection of sensitive habitat through increased usage of environmental services, availability of clean boating information and improved recreational user awareness that their activities can harm wildlife.

5) Enhanced protection of local native species by providing information to boaters on how to prevent/ reduce the spread of non-native invasive species.

## III. Project Performance Tables

**Table III a**

**Project Performance Measures for Load Reduction Activities**

| Project Goals | Desired Project Outcomes | Project Performance Measures | Measurement Tools and Methods | Targets |
|---|---|---|---|---|
| 1) Reduce the discharge of pollutants to the Delta from potential non-point sources that may be associated with recreational boating, body-contact recreation and marina operations and as a result, provide valuable local and statewide benefits through lessons learned about effective environmental services, pollution prevention outreach, and implementation strategies | 1) A progressive reduction in the non-point source pollution attributed to the growing recreational boating population and marina industry in the Delta.<br><br>2) Improved protection of sensitive habitat through increased usage of environmental services, availability of clean boating information and improved recreator awareness that their activities can harm wildlife. | 1) Approx. no. of gals of used oil collected from Oil Recycling Ctrs<br><br>2) Approx. no. of used oil absorbents collected at Oil Absorbent Exchange Ctrs<br><br>3) Approx. no. of oil filters collected at Used Oil Recycling Ctrs<br><br>4) Approx. no. of gals of used oil from used oil absorbents collected at the oil absorbent exchange locations<br><br>5) Approx. no. of pounds of monofilament fishing line recycled<br><br>6) Approx. no. of pounds of recyclables<br><br>7) Approx no. of cigarette butts collected | 1) Determine the number of measures implemented and estimate the pollution collection of each to determine load reduction. | 1) Install free marina-based environmental services:<br>2) Install a minimum of 3 Oil Recycling Ctrs.<br>3) Install a minimum of 10 Oil Absorbent Exchange Ctrs.<br>4) Install a minimum of 50 pet waste stations<br>5) Install a minimum of 13 fishing line recycling centers<br>6) Install a minimum of 50 recycling bins at launch ramps<br><br>7) Install a minimum of 20 cigarette butt containers at marinas (this task is not a requirement of the terms of the grant however will provide added value to reduction of marine debris) |

**Table III b**

**Project Performance Measures for Education, Outreach, and Capacity-building**

| Project Goals | Desired Project Outcomes | Project Performance Measures | Measurement Tools and Methods | Targets |
|---|---|---|---|---|
| 1) Establish a Pollution Prevention Program that seeks responsible, shared solutions to water quality problems by influencing the behavior of marina operators, recreational boaters and the general public. | 1) Enhanced protection of local native species by providing information to boaters on how to prevent/ reduce the spread of non-native invasive species<br><br>2) Improved knowledge base of recreators and marina operators regarding access to environmental services, the importance of pollution prevention and safety, and tangible strategies to reducing their impact on Delta water quality and beneficial uses. | 1) No. of educational boater kits handed out<br><br>2) No. of Sacramento-San Joaquin Delta Recreational Boating Maps distributed<br><br>3) No. of Clean Boating Theme Posters distributed to Delta marinas, including number of informational kiosks that display posters<br><br>4) Dockwalker training attendance and no. of kits and survey distributed through their efforts<br><br>5) No. of completed Recreational Boater Surveys.<br><br>6) No. of Delta Dockwalkers to date. | 1) Marina Operator Survey to collect information for a new Delta Boating Map<br><br>2) Dockwalker training workshop review forms<br><br>3) Pollution Prevention Tracking Forms<br><br>4) Create a comprehensive press kit that will be utilized to efficiently promote new environmental services and campaign messages<br><br>5) Recreational Boater Survey for 2007-2008 boating season. | 1) Distribute a minimum of 20,000 boater kits<br><br>2) Distribute a minimum of 25,000 new Sacramento-San Joaquin Delta Recreational Boating Maps<br><br>3) Install a minimum of 10 Informational Kiosks to promote clean boating practices and other campaign messages<br><br>4) Distribute 6 Theme Posters to marinas throughout the Delta and post in Informational Kiosks<br><br>5) Train a minimum of 50 new Delta Dockwalkers<br><br>6) Establish DBP website featuring program info and goals. |

**Table III c**

**Project Performance Measures for Planning, Research, Monitoring, or Assessment**

| Project Goals | Desired Project Outcomes | Project Performance Measures | Measurement Tools and Methods | Targets |
|---|---|---|---|---|
| 1) Develop measurement and estimation tools (model) that will assist in understanding the effectiveness of environmental services and boater/marina operator outreach towards reducing impacts on beneficial uses in the Delta. | 1) Newly installed marina-based pollution prevention services (improved access and awareness of local sewage pump-out facilities, etc).<br><br>2) Improved understanding (benefiting both local and state stakeholders) of how to quantify pollution prevention and which environmental services are most successful through the development and pilot-testing of the Pollution Prevention Model. | 1) Conclusions drawn from Model Results | 1) Completion of model to indirectly estimate benefits of program as measured by load reduction of identified constituents, and the corresponding reduction in load/concentration at sensitive beneficial use sites in the Delta | 1) A refined and fully developed model that is scientifically valid and functions in a way that will provide quantifiable data related to pollutant load reduction |

# Evaluating BMP Effectiveness to Reduce Volumes of Runoff and Improve Quality of Runoff from Urban Environments (excerpts from 2007 PAEP)

## II. Project Goals & Desired Outcomes

The goals of this project are focused on identifying cost-effective landscape BMPs and educating the public and governmental organizations about the importance of landscape BMPs and how they are implemented in residential neighborhoods. Desired outcomes include establishment of long-term study sites and supporting data, an increase in the understanding and use of landscape BMPs, and reduced pollution loads.

Goals of this project are:

1. Characterize water use and dry-season pollutant loads from 8 residential neighborhoods study sites
2. Identify effectiveness of selected BMPs in reducing pollutant loads from residential neighborhoods
3. Evaluate cost-effectiveness of BMP implementation
4. Educate homeowners, stakeholder groups, professional and trade groups, and the public about landscape BMPs and their value
5. Increase promotion of landscape BMPs
6. Increase implementation of landscape BMPs for pollution load reduction.
7. Establish programs and materials to sustain future outreach for new BMP development
8. Estimate regional load reductions resulting from landscape BMP adoption
9. Report recommendations for implementation of landscape BMPs in study areas (i.e. Sacramento and Orange Counties) and broader regions of California

Desired outcomes of this project are:

1. Eight (8) long-term sites for study of residential runoff meeting study criteria
2. A database with a complete timeline of compiled water-use records for each long-term site
3. SWAMP-compatible database of residential dry-season runoff and water quality data that complies with the QAPP and SOPs
4. A list of selected BMPs ranked by pollution load reduction effectiveness
5. Precise and accurate documentation of residential test plots and their evolution
6. Database describing residential plots, experiments done, and study results that complies with the QAPP and SOPs
7. An Evaluation of the cost-effectiveness of the set of BMPs included in the project relative to alternative BMPs such as watershed or subwatershed level retention or treatment.
8. Homeowners, stakeholder groups, professional and trade groups, and local governments who understand and promote the nature and importance of landscape BMPs
9. Residential neighborhoods developed and retro-fitted with landscape BMPs to minimize pollutant loads associated with residential runoff
10. Sustainable outreach programs with materials that promote a long-term understanding of landscape BMPs
11. Reduced pollution loads as a result of BMP implementation
12. A table listing BMPs and an accurate final estimate of net regional Sacramento and Orange County study site load reductions for proposed applications of BMPs
13. Report detailing recommendations for implementation of landscape BMPs in study areas (i.e. Sacramento and Orange Counties) and broader regions of California

## III. Project Performance Measures Tables

This project's activities fall into three "categories of activity" as defined by the Water Boards. These categories include "Planning, Research, Monitoring, and Assessment," "Education, Outreach, and Capacity-building," and "Load Reduction." Project goals, desired outcomes, indicators, tools and methods, and targets are listed by category in the following tables of "project performance measures." Performance measures for "Planning, Research, Monitoring, and Assessment" are listed in Table 1. Performance measures for "Education, Outreach, and Capacity-building" are listed in Table 2. Performance measures for "Load Reduction" are listed in Table 3.

**Table 1. Project Performance Measures for Planning, Research, Monitoring, or Assessment Activities in Evaluating Best Management Practices (BMPs) Effectiveness to Reduce Volumes of Runoff and Improve the Quality of Runoff from Urban Environments**

| Project Goals | Desired Outcomes | Output Indicators | Outcome Indicators | Measurement Tools and Methods | Targets |
|---|---|---|---|---|---|
| 1. Characterize water use and dry-season pollutant loads from 8 residential neighborhood study sites. | 1. Eight long-term sites for study of residential runoff meeting study criteria.<br>2. Database with a complete timeline of compiled water-use records for each long-term site.<br>3. SWAMP-compatible database of residential dry-season runoff and water quality data that has passed QAPP and SOPs. | 1. No. of potential sites identified.<br>2. Number of water-use records entered for each site.<br>3. No. of runoff samples collected. | 1. Adequate number of sites identified meeting study criteria.<br>2. Number of years of water-use records for each site.<br>3. Percentage of flow measurements passing QAPP.<br>4. Percentage of sample analyses passing QAPP.<br>5. Ability of dry season runoff and water quality data to be integrated with SWAMP. | 1. Tools: Study criteria. Methods: GIS, agency guidance, and site visits will be used to produce a list of sites.<br>2. Tools: Timeline, SOPs, metadata. Methods: Agency records and surveys will be entered into a database of water use.<br>3. Tools: SOPs and QAPP. Methods: Automatic samplers, grab samples, and field measurements. | 1. Four sites meet criteria for study in both north and south study areas.<br>2. Water-use records adequate (in number and detail to be determined by sites) for cost analyses and water balance.<br>3. 80% of runoff samples successfully collected.<br>4. 95% of flow measurements and sample analyses pass QAPP.<br>5. 100% compatibility with SWAMP database. |

(Table continued on next page)

**Table 2 (continued). Project Performance Measures for Planning, Research, Monitoring, or Assessment Activities in Evaluating Best Management Practices (BMPs) Effectiveness to Reduce Volumes of Runoff and Improve the Quality of Runoff from Urban Environments**

| Project Goals | Desired Outcomes | Output Indicators | Outcome Indicators | Measurement Tools and Methods | Targets |
|---|---|---|---|---|---|
| 2. Identify the effectiveness of selected BMPs in reducing pollutant loads from residential neighborhoods. | 1. A list of studied BMPs ranked by effectiveness in reducing pollution load.<br>2. Precise and accurate documentation of test plots and their evolution.<br>3. Database describing plots, experiments completed, and study results that have passed data entry QA/QC and SOPs. | 1. No. of BMPs tested at study plots.<br>2. No. of photographic records of test plot evolution.<br>3. No. of runoff samples collected from test plots.<br>4. No. of records of information entered into database. | 1. No. of BMPs successfully tested.<br>2. Completeness of photographic record that documents each plot study.<br>3. No. of flow measurements passing QAPP and SOPs.<br>4. No. of sample analyses passing QAPP and SOPS<br>5. No. of database records entered that pass SOPs. | 1. Tools: Documentary pictures (1/month), SOPs Methods: Test plots set up and photographed in accordance with PRISM Project 50 at the South Coast Research and Extension Center in Irvine, CA.<br>2. Tools: QAPP. Methods: Flow and water quality sampling in accordance with PRISM Project 50 at the South Coast Research and Extension Center in Irvine, CA.<br>3. Tools: SOPs. Methods: Database information entered and checked through SOPs. | 1. A list of the 5 BMPs most effective in reducing either flow or concentration of constituents of concern.<br>2. 100% complete photodocumentation of plot studies.<br>3. Statistically significant study results entered with 100% accuracy into a database associating landscape BMPs with pollutant loads (i.e amount and quality of runoff). |
| 3. Evaluate cost-effectiveness of BMP implementation. | 1. An Evaluation of the cost-effectiveness of the set of BMPs included in the project relative to alternative BMPs such as watershed or subwatershed level retention or treatment. | 1. Pages of cost data gathered from project sites.<br>2. Pages of cost data collected from outside sources including government agencies, industry, and published literature. | 1. No. of sites with accurate cost data.<br>2. No of alternative practices with accurate cost data | 1. Tools: Metadata, completeness of costs and lists considered, and basic statistics<br>Methods: Standard project cost-benefit analysis methods. Alternative costs averaged across sites. | 1. A complete and accurate list of each BMP and alternative practice that compares the cost-effectiveness of Landscape BMPs with other alternatives. |

**Table 2. Project Performance Measures for Education, Outreach, and Capacity-building Activities for Evaluating Best Management Practices (BMPs) Effectiveness to Reduce Volumes of Runoff and Improve the Quality of Runoff from Urban Environments**

| Project Goals | Desired outcomes | Output Indicators | Outcome Indicators | Measurement Tools and Methods | Targets |
|---|---|---|---|---|---|
| 1. Educate homeowners, stakeholder groups, professional and trade groups, and the public about landscape BMPs and their value. | 1. Homeowners who understand the nature and importance of BMPs for urban/suburban residential areas.<br>2. Stakeholder groups that understand BMPs.<br>3. Professional, trade groups, and local governments that understand BMPs. | 1. No. of contacts with outreach advisory group members.<br>2. Amount of educational materials linking scientific and technical aspects of project with interests of various groups.<br>3. No. of contacts with homeowners in treatment study sites.<br>4. No. of meetings with homeowner groups, neighborhood associations, stakeholder groups, professional and trade groups, and local government staff.<br>5. No. of public events (including Turfgrass and Landscape field days and regional outreach activities).<br>6. No. of newspaper articles. | 1. Increased number of homeowners that know about BMPs.<br>2. Increased number of stakeholder groups that understand BMPs.<br>3. Increased number of professional and trade organizations that understand BMPs. | 1. Tools: Basic Statistics, Records of number of meetings and attendees. Records of homeowner knowledge and interest from opinion surveys conducted in workshops, home and garden shows, and other venues.<br>Methods: Develop a project support advisory group, prepare materials and toolkit. Present materials and toolkit at workshops, home and garden shows, and other venues. Opinion/knowledge surveys to measure targets 1-3. | 1. 20% increase in number of homeowners who know what BMPs are.<br>2. 20% increase in the number of stakeholders who know what BMPS are.<br>3. 20% increase in professional and trade organizations that know what BMPs are.<br>(Note: Targets numbered 4-10 measure output)<br>4. At least 3 stakeholder groups that receive presentations on BMPs.<br>5. At least 3 professional and trade organizations that receive presentations on BMPs.<br>6. At least 5 meetings with local government officials.<br>7. At least 2 broad public events where BMP information provided<br>8. Two Turfgrass and Landscape field days.<br>9. Two Urban Forestry outreach events.<br>10. Newspaper articles on PIN51 project and BMPs in at least three newspapers. |

(Table continued on next page)

**Table 3 (continued). Project Performance Measures for Education, Outreach, and Capacity-building Activities in Evaluating Best Management Practices (BMPs) Effectiveness to Reduce Volumes of Runoff and Improve the Quality of Runoff from Urban Environments**

| Project Goals | Desired outcomes | Output Indicators | Outcome Indicators | Measurement Tools and Methods | Targets |
|---|---|---|---|---|---|
| 2. Increase promotion of residential BMPs. | 1. Homeowner and neighborhood groups that promote residential BMPs.<br>2. Stakeholder groups that support and promote residential BMPs.<br>3. Professional and trade organizations that promote residential BMPs. | 1. No. of homeowner and neighborhood groups that promote residential BMPs.<br>2. No. of stakeholder groups that adopt positions supporting residential BMPs and promote residential BMPs to their members.<br>3.No. of professional and trade organizations that actively promote residential BMPs.<br>4. No. of local governments requiring residential BMPs for new development.<br>5. No. of web sites on which project-related outreach materials are posted. | 1. % of homeowners and neighborhood groups that promote residential BMPs.<br>2. % of contacted stakeholder groups that promote residential BMPs.<br>3 % of professional and trade organizations that promote residential BMPs, including training.<br>4 % of local governments preparing residential BMP requirements for local plans and ordinances. | 1. Tools: Surveys of groups and organizations. Methods: Collect post-treatment survey data throughout project to find out the homeowners, neighborhood groups, stakeholders, professional trade organizations, and local governments that acted on the information. Post materials to selected web sites. | 1. At least 4 homeowner and neighborhood groups use our materials and educate their members.<br>2. At least 2 stakeholder groups educate their members.<br>3. At least 2 professional and trade organizations educate and train their members in residential BMPs.<br>4. At least 4 additional local governments prepare residential BMP requirements for new developments. |
| 3. Increase implementation of residential BMPs for pollution load reduction. | 1. Residential neighborhoods developed and retro-fitted with landscape BMPs. | 1. No. of homes adopting BMPs. | 1. % Increase of homes in treatment areas using BMPs. | 1. Tools: Surveys of homeowners before and after outreach.<br>Methods: Compare BMP survey answers of use before and after education of BMPs. | 1. At least 20% more homeowners use BMPs or plan to do so within 2 years. |
| 4. Establish programs and materials to sustain future outreach for residential BMP development. | 1. Sustainable outreach programs with materials that promote a long-term understanding of landscape BMPs. | 1. No. of brochures, flyers, and handouts developed.<br>2. No. of long-term programs implemented. | 1. % Interest of homeowners, stakeholder groups, professional and trade groups, and the public.<br>2. % Integration and application of information known and information | 1. Tools: Surveys, interviews, and documentation of outreach material in a long-term policy or plan.<br>Methods: Perform | 1. 20% interest in future BMP implementation and developing long term programs.<br>2. 100% integration of outreach material into the long-term plan or policy of an |

| | | | | | |
|---|---|---|---|---|---|
| | | | learned into a long term program. | surveys and document new policy or program direction established. | organization. |

**Table 3. Project Performance Measures for Load Reduction Activities in Evaluating Best Management Practices (BMPs) Effectiveness to Reduce Volumes of Runoff and Improve the Quality of Runoff from Urban Environments**

| Project Goals | Desired Outcomes | Output Indicators | Outcome Indicators | Measurement Tools and Methods | Targets |
|---|---|---|---|---|---|
| 1. Estimate regional load reductions resulting from landscape BMP adoption. | 1. Pollutant load reduction.<br>2. A table listing BMPs and an accurate final estimate of net regional Sacramento and Orange County load reductions resulting from proposed application of BMPs. | 1. Records of runoff volume and water quality measurements from control and test sites at experimental plots and in study areas.<br>2. Table listing BMPs and net pollutant load reductions for constituents of concern.<br>3. A list of current and estimated future residential areas for each county.<br>4. A list of extrapolated regional load reductions calculated from BMP study sites. | 1. Statistically significant or non-significant differences observed in runoff volume and water quality from control and test sites at experimental plots and in study areas.<br>2. Homogeneous % of residential areas that represent future development trends.<br>3. Accuracy of the total land area of current and future residential areas of coverage in each County. | 1. Tools: Metadata, Statistical and GIS analysis.<br>Methods: Load reductions due to BMPs will be estimated by land area from study results for each constituent of concern. Local and regional average annual loads will be calculated for each constituent of concern from existing city or county records. Load reductions will be extrapolated to larger regional planning areas to estimate net benefit of BMP implementation. Percent homogeneous and representation will be determined through GIS analysis of income, age, ethnicity, etc. | 1. A reduction in pollution loading at BMP treated sites.<br>2. Statistically significant difference observed in runoff volume and water quality from control and test sites at experimental plots and in study areas.<br>3. 80% homogeneous residential areas, defined with less than 3% uncertainty in coverage, that reasonably represent future trends in development.<br>4.. No data gaps for targeted residential area information within regional area boundaries for each County. |
| 2. Report recommendations for | 1. A report detailing study area and regional | 1. A document including introduction, procedure, | 1. Accuracy of report documentation and | 1. Tools: QAPP and SOPs. | 1. An accurate representation of study background, |

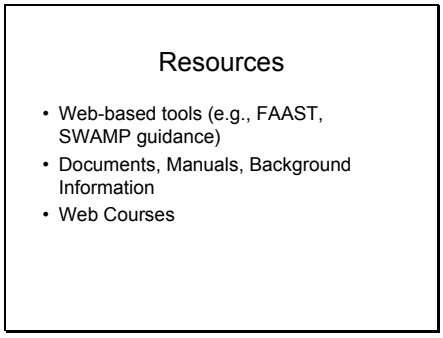
| | | | | | |
|---|---|---|---|---|---|
| implementation of landscape BMPs in study areas (i.e. Sacramento and Orange Counties) and broader regions of California. | area recommendations for landscape BMPs in Sacramento and Orange Counties. | analysis, results, and conclusion with supporting figures such as tables, graphs, photos, etc. | figures. | Methods: Summarize study and findings. Draw conclusions from findings and make recommendations. | procedure, results, and recommendations. |

*Agenda Item 9*

**Resources On-Line**

## Slides

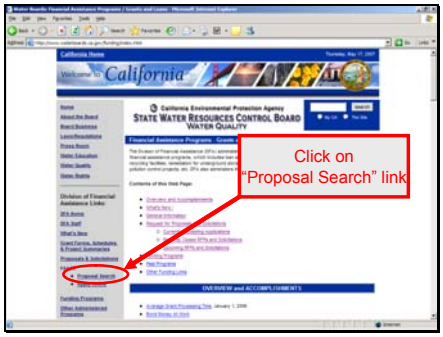
Slide 1



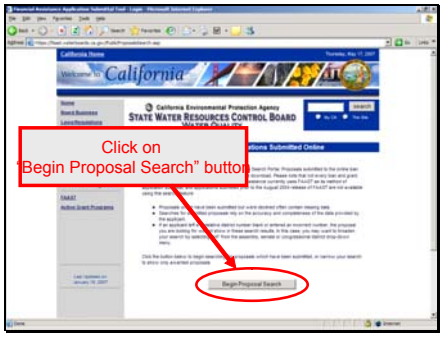

Slide 2

Slide 3

Slide 4




Slide 5



Slide 6

## FAAST lets you leverage and effectively combine funding

- Use FAAST to search for other projects in the project's watershed and browse their project descriptions.
- Compare PAEPs of projects in the same watershed.
- Leverage and combine funding from multiple projects

Slide 7

## How to Collaborate Regionally

- IRWM gives us an example.

Plans identify a vision for regional water(shed) management and ranked projects

The cumulative results of multiple projects may add up to more than the sum of individual projects

Slide 8

## How to Aggregate Data to I.D. Cumulative Watershed Benefits

- Find PAEPs from multiple projects on FAAST
- Identify desired outcomes
- Determine baseline conditions
- Determine key management questions at watershed scale
- Link project data to conceptual models of watershed condition improvements

Slide 9

## Project Evaluation Data and Relationship to SWAMP

***Project data are useful to document:***

**Baseline Conditions at Project Site(s)**
**Short-Term Change in Conditions or Stressors**

**305(b) Reports to Congress**

**Needs for Policy and Program Improvements**

Slide 10

## SWAMP and Relationship to PAEP

- SWAMP is the Surface Water Ambient Monitoring Program
- Data are required to be "SWAMP comparable" – SWAMP is working on specific guidance
- SWAMP is preparing an easy tool to document and share data

Slide 11

## Future On-line Tools @ State Board

- Future additions to Public Search Page will include
  - Project Classification Data module
  - Ability of Applicant / Grant Manager to upload
    - Final Project Reports
    - Annual Reports
    - Scope of Work
    - PAEP
    - And others

Slide 12

## Other Future On-line Tools

- SWAMP data management and sharing tool
- SWAMP Expert System for QAPP development

Slide 13

**Grant Prioritization Internet data entry resides at:**
http://www.ccamp.org/Grant_Data/Grant_Ranking_Homepage.htm
.

**A water quality data (grant and other data) upload system demo resides at:**
http://www.ccamp.org/cademo/html/senddata.htm

**A water quality data presentation system resides at:**
http://www.ccamp.org/ca300/3/3.htm

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# Financial Assistance Application Submittal Tool - Description and Use

## WHAT IS FAAST?

The State Water Board's Division of Financial Assistance (DFA) uses an online system called FAAST (Financial Assistance Application Submittal Tool) to administer many of its loan and grant programs.

## THE PUBLIC SEARCH PAGE

Once a proposal has been submitted to DFA, it becomes public record. Proposals which have been submitted via the FAAST online system are available for public viewing at https://faast.waterboards.ca.gov/PublicProposalsSearch.asp

This tool is offered to the public for the purpose of filling routine public records requests. Once proposals within an RFP have been awarded, the status of those proposals (whether awarded or declined) will also show on FAAST.

Please note that not all programs currently use FAAST to submit their applications. The following programs have application information available as of May 15, 2007:

Agricultural Water Quality Grants Program (2004)
Clean Beaches Initiative Program, Proposition 50
2005-06 Consolidated Grants Program, Phases 1 and 2
Integrated Regional Water Management Planning
Integrated Regional Water Management Implementation Step 1
Integrated Regional Water Management Implementation Step 2 (Call Back Only)

If you have any questions regarding how to use the online proposal search tool, please contact the FAAST team at FAAST_ADMIN@waterboards.ca.gov or 1-866-434-1083.

## HOW TO SEARCH FOR OTHER PROPOSALS

You can use the search tool to find other proposals in your watershed, other proposals with similar subject matter, and more. The following instructions focus on:

(1) how to find other proposals in your watershed, and (2) how to find other proposals with similar subject matter.

## Resources

### Web-Based Training Courses, Guidance, and Libraries

California Watershed Assessment Manual (Treasure Trove of Information and Links)
http://cwam.ucdavis.edu/

http://www.waterboards.ca.gov/nps/volunteer.html

http://www.waterboards.ca.gov/swamp/qapp.html

EPA Watershed Training Academy (Treasure Trove of Information and Links – everything from monitoring to evaluating socio-economic impacts)
http://www.epa.gov/watertrain

http://www.calfish.org/DesktopDefault.aspx?tabId=112

EPA Watershed Plan Builder (step-by-step guidance)
http://iaspub.epa.gov/watershedplan/planBuilder.do?pageId=51&navId39&sessionActive=true

### Methods and Procedures, How-To Manuals

http://www.cnr.berkeley.edu/forestry/comp_proj/DFG/Monitoring%20the%20Implementation%20and%20Effectiveness%20of%20Fisheries.pdf

http://mpsl.mlml.calstate.edu/swcompare.htm

California Rapid Assessment Method for Wetlands and Riparian Habitats
CRAM Home

California Stream Bioassessment
http://www.dfg.ca.gov/cabw/csbp_2003.pdf

http://www.dfg.ca.gov/nafwb/manual.html

http://www.dfg.ca.gov/nafwb/pubs.html

http://www.dfg.ca.gov/hcpb/species/stds_gdl/survmonitr.shtml

http://www.epa.gov/watertrain/restor.html

http://www.waterboards.ca.gov/sanfranciscobay/Agenda/04-16-03/Stream%20Protection%20Circular.pdf

http://water.usgs.gov/nawqa/protocols/OFR-93-408/habit1.html

http://www.epa.gov/watertrain/river/

**Mapping Tools**

Riparian Mapping
http://www.sfei.org/wetlands/Reports/No522_WL_RHJVReportFINAL.pdf

**Education and Outreach**

http://www.michigan.gov/deq/0,1607,%207-135-3313_3682_3714-75944--,00.html

http://learningstore.uwex.edu/Program-Development-Evaluation-C234.aspx

**Models**

http://www.csc.noaa.gov/crs/cwq/isat.html

http://www.epa.gov/waterscience/basins/

http://www.epa.gov/ednnrmrl/models/swmm/index.htm

http://it.tetratech-ffx.com/stepl/models$docs.htm

http://www.csc.noaa.gov/crs/cwq/nspect.html

## Reports, BMP References

http://www.sfei.org/watersheds/reports/GuadalupeYear1final.pdf

http://www.sccwrp.org/pubs/annrpt/96/ar-04.htm

http://www.bmpdatabase.org/

http://yukon.tetratech-ffx.com/mpminer/index.jsp

**Miscellaneous References**


http://www.ksg.harvard.edu/visions/performance_management/selected_readings.htm

http://www.sfei.org/watersheds/reports/GuadalupeYear1final.pdf

http://www.sccwrp.org/pubs/annrpt/96/ar-04.htm

http://www.cwp.org/stream_restoration.pdf

http://www.cbcrc.org/2003speakerpapers/Munoz%20and%20Aguilar%5B1%5D.v1%20for%20web%20site.pdf

http://www.on.ec.gc.ca/solec/indicators2000-e.html

http://www.valleywater.org/_WMI/index.shtm

http://science.calwater.ca.gov/sci_tools/project_perf_eval.shtml

http://mpsl.mlml.calstate.edu/swdwnlds.htm

http://www.swrcb.ca.gov/swamp/docs/wqindicators_considerations.doc

*Agenda Item 10*

**Course Evaluation**

| TRAINING COURSE EVALUATION | | |
|---|---|---|
| **COURSE TITLE** | | **NAME OF INSTRUCTOR** |
| **DATES OF TRAINING** | **ATTENDEE DIVISION/REGION** | **ATTENDEE CLASSIFICATION** |
| **1. The level of material presented relative to my classification and duties was (check one):**<br>**☐. appropriate ☐ too simple ☐ too advanced** | | |
| **2. Quality of instruction:**<br>**1 2 3 4 5 6 7 8 9 10 (circle one 1 = poor; 10 = excellent)** | | |
| **3. Quality of content:**<br>**1 2 3 4 5 6 7 8 9 10 (circle one 1 = poor; 10 = excellent)** | | |
| **4. What suggestions do you have that would improve this course?** | | |

**5. Suggestions for courses or areas of training that you feel would benefit Water Board staff?**

**6. How well did you understand the rationale behind PAEP and its contents?**

**1 2 3 4 5 6 7 8 9 10 (circle 1=poor; 10=excellent)**

**7. How well were high-priority questions answered?**

**1 2 3 4 5 6 7 8 9 10 (circle 1=poor; 10=excellent)**

**8. How well was the workshop able to clarify the use of the PAEP as a tool to write better grant proposals, and plan, manage, and track the project better?**

**1 2 3 4 5 6 7 8 9 10 (circle 1=poor; 10=excellent)**

**Other comments:**

**THANK YOU!**

Direct comments and suggestions at Academy@waterboards.ca.gov